

IN THE CLAIMS:

1. (currently amended) A method for producing silicon wafers with improved surface features, comprising the steps of:

- (a) supplying a substrate fabricated substantially of silicon; ~~and~~
- (b) exposing the substrate to an etching bath containing a caustic etching solution including an additive, wherein the additive is ~~a mixture of~~ potassium iodate, ~~and~~ sodium iodate or a mixture thereof;
- (c) removing a portion of the solution from the etching bath;
- (d) exposing the portion of removed solution to the additive; and
- (e) returning the exposed portion of removed solution to the etching bath.

2. (original) A method according to Claim 1, wherein the additive is potassium iodate.

3. (original) A method according to Claim 1, wherein the additive is sodium iodate.

Claim 4. (cancelled)

5. (original) A method according to Claim 1, wherein the additive has an additive concentration of at least about 0.01% by weight.

6. (original) A method according to Claim 1, further comprising the step of forming the additive by chemical reaction in the etching bath.

7. (original) A method according to Claim 1, further comprising the step of forming the additive by a reaction in the etching bath between iodic acid and hydroxide.

8. (original) A method according to Claim 1, further comprising the step of forming the additive by an oxidation of I₂ with chlorate in the etching bath.

9. (original) A method according to Claim 1, wherein the additive is sodium chlorite.

10. (previously presented) A method for producing silicon wafers with improved surface features, comprising the steps of:

- (a) supplying a substrate fabricated substantially of silicon;
- (b) exposing the substrate to an etching bath containing a caustic etching solution including an additive, wherein the additive is a chlorite salt, an iodate salt, or a mixture thereof;
- (c) removing a portion of the solution from the etching bath;
- (d) exposing the portion of removed solution to the additive; and
- (e) returning the exposed portion of removed solution to the etching bath.

11. (previously presented) A method according to Claim 1, wherein the additive includes lithium iodate.

12. (previously presented) A method according to Claim 1, wherein the additive includes an alkaline medium.

13. (previously presented) A method according to Claim 1, further comprising the step of:

(c) replenishing the additive by adding more iodate salt as the iodate salt is depleted.

14. (previously presented) A method according to Claim 13, wherein the additional iodate salt is selected from the group consisting of a solid, an aqueous solution and a slurry of the additional iodate salt with a suspending agent.

Claims 15 and 16. (cancelled)